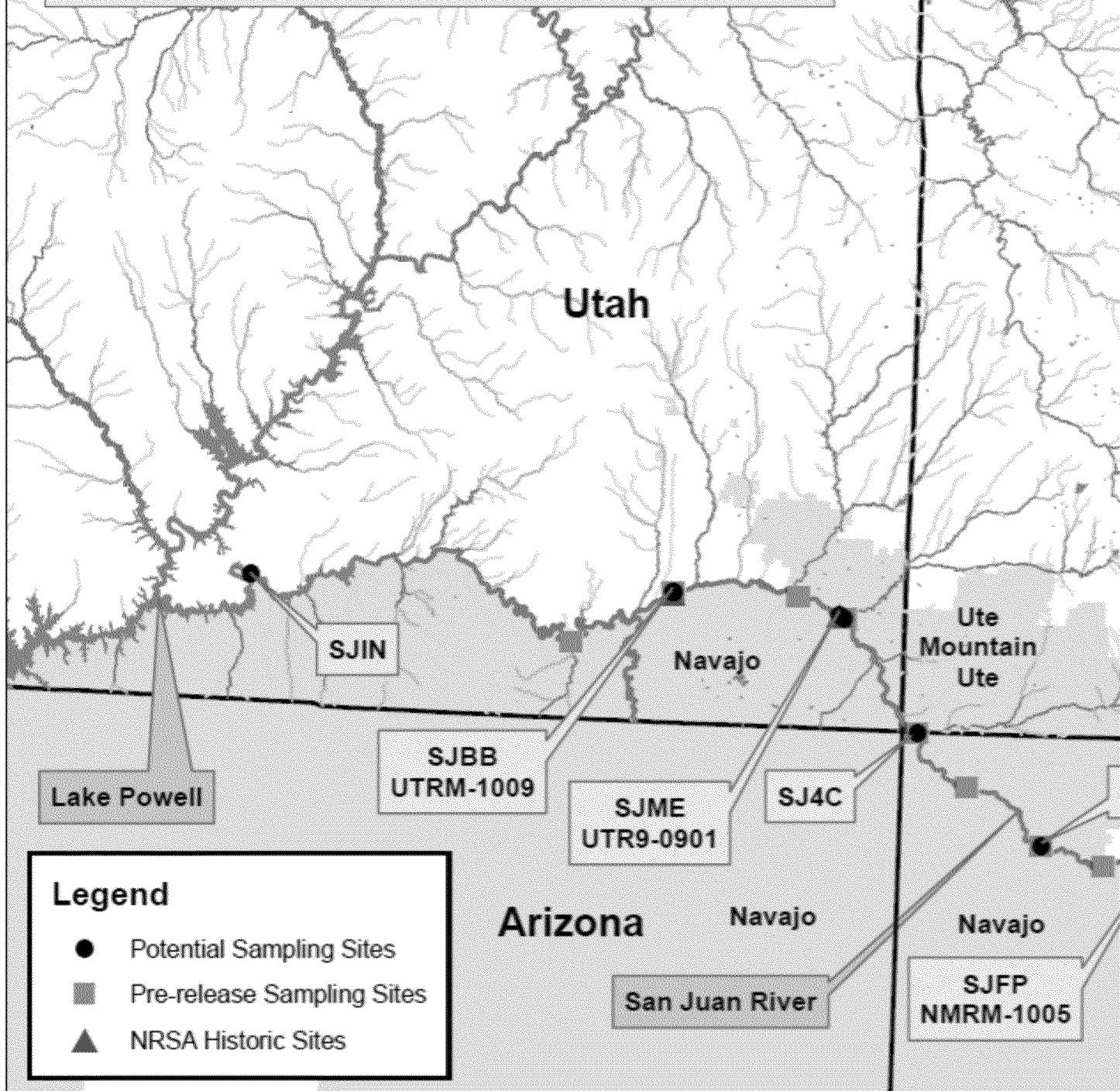


**To:** StClair, Christie[StClair.Christie@epa.gov]; EOC Public Information[EOC\_Public\_Information@epa.gov]; Deitz, Randy[Deitz.Randy@epa.gov]; Cohen, Nancy[Cohen.Nancy@epa.gov]; Bassler, Rachel[Bassler.Rachel@epa.gov]; Ostrander, David[Ostrander.David@epa.gov]; Honker, William[honker.william@epa.gov]; Garcia, Bert[Garcia.Bert@epa.gov]; Wall, Tom[Wall.Tom@epa.gov]; Hamilton, Karen[Hamilton.Karen@epa.gov]; Loop, Travis[Loop.Travis@epa.gov]; Bravo, Antonio[Bravo.Antonio@epa.gov]  
**From:** Spence, Sandra  
**Sent:** Thur 10/8/2015 6:55:28 PM  
**Subject:** RE: Huffington Post (ddl Wed 10/7): long-term monitoring plan  
Post-GKM draft conceptual monitoring plan Clean 2015\_09\_17.pdf

I'm not sure....if you look in the plan at the map in Figure 1 you can see locations from the headwaters in CO all the way down to Lake Powell. Also, the table with the sampling locations has some locational information. Here's the map copied directly from the plan. I've attached the plan for you as well.

# Post Gold King Mine Release Incident: Conceptual Monitoring Plan for Surface Water, Sediments, and Biology - Potential Sampling Sites



**From:** StClair, Christie  
**Sent:** Thursday, October 08, 2015 12:36 PM  
**To:** Spence, Sandra; EOC Public Information; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen; Loop, Travis; Bravo, Antonio  
**Subject:** RE: Huffington Post (ddl Wed 10/7): long-term monitoring plan

Thanks, Sandie. Can you help me understand why the reporter isn't seeing sampling locations in CO, NM or NN? Is she looking in the wrong place?

Christie St. Clair

Office of Public Affairs

Environmental Protection Agency  
Washington, DC  
o: 202-564-2880  
m: 202-768-5780

**From:** Spence, Sandra  
**Sent:** Thursday, October 08, 2015 2:27 PM  
**To:** EOC Public Information; StClair, Christie; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen; Loop, Travis; Bravo, Antonio  
**Subject:** RE: Huffington Post (ddl Wed 10/7): long-term monitoring plan

Below is my trimmed down version of the original draft I sent out earlier this week. Christie and Nancy, if you feel this needs further reduction, I think you could cut out the sentences shown below in blue. Please, give me a call if you have questions.

Thanks,

Sandie

Inquiry:

1. Without a plume model, it seems that the sampling plan lacks pertinent information. Specifically, how does the sampling plan provide statistically meaningful information on the plume itself? The aerial photographs do not provide any information about what is happening on the bottom of the river, or the flora and soil on the riverbanks or its tributaries.

The purpose of the long-term monitoring plan (*Post-GKM Release Incident Conceptual Monitoring Plan*) is not to characterize the plume itself but rather to collect data in the surface waterbodies potentially impacted by the GKM Release Incident to determine if water and sediment quality trends are similar to trends observed before the GKM Release Incident. While the latest monitoring information after the GKM Release Incident shows contaminant levels have returned to pre-spill levels, this study's monitoring information will serve to inform if these findings remain consistent across the range of annual flow conditions. After completing one year of monitoring under this plan, if results indicate maintenance of pre-release/historic trends, routine monitoring will continue per state, tribal, and Federal program strategies and priorities. If pre-release/historic trends across the watershed are not maintained at some locations in the watershed, the EPA will conduct additional site-specific investigations as appropriate and use its authorities to work with other federal agencies, states, tribes, and local entities to address these problems. Regarding plume characterization, prior to implementation of this plan daily sample collection began on August 5 and continued through much of September, well after water quality and sediment results showed that pre-event had been re-attained throughout the watershed. Post-release sampling throughout the watershed is still underway. Hence, hundreds of samples have been collected to thoroughly characterize pre-release, release (plume), and short-term post-release conditions since August 5.

2. The plan mentions Region 8, but not Region 6 or 9. It seems to omit Colorado altogether. Are there separate plans for each region?

a. The plan includes 23 sampling locations that span the entire watershed. Locations were selected to ensure distribution of sampling locations across state and tribal jurisdictions and includes locations in Colorado, Southern Ute Reservation, New Mexico, Ute Mountain Ute Reservation, Navajo Nation, and Utah. Sites in Colorado, Southern Ute Reservation, Ute Mountain Ute Reservation, and Utah fall within EPA Region 8. Sites in New Mexico fall within EPA Region 6. Sites in the Navajo Nation fall within EPA Region 9.

3. The interim plan seems to lack any input from veterinarians, medical toxicologists or agricultural toxicologists. How will EPA assess potential health impacts to humans, wildlife, livestock and crops?

a. The *Post-GKM Release Incident Conceptual Monitoring Plan* was developed with input from EPA staff with a broad range of expertise including aquatic toxicologists, human health toxicologists, pharmacologists, risk assessors, biologists, environmental scientists, geographic information specialists, and a Doctor of Veterinary Medicine.

For water quality results, EPA plans to assess potential impacts to human health, aquatic life, and agricultural uses by comparing water quality results of this study against water quality standards of the states, tribes, and EPA's national water quality criteria recommendations. State, tribal and/or EPA recommended ambient water quality criteria are set at the highest concentration of a pollutant or parameter in water that is not expected to pose a significant risk to human health, the majority of species in a given environment, or an agricultural use and these standards reflects the latest scientific knowledge from a broad range of disciplines. Comparing results from this study against water quality criteria allows one to assess whether or not the concentration of pollutants present at a sampling location exceed allowable water column thresholds for protection of human health, aquatic life, and agricultural uses.

For soil/sediment data interpretation, EPA identified screening levels to use in assessing this risk and sediment data. Comparing soil/sediment results against these screening levels allows one to assess whether or not the concentration of pollutants present in the soil/sediment at a sampling location exceed risk thresholds for protection of recreational users.

4. Also, we had requested information about the concentrations in the containment ponds. We viewed three ponds where lime is being added, which we understand results in heavy metals forming hydroxates that fall to the bottom. How will that waste be dealt with? Will it be tested for safety, and where will it end up? How will the EPA determine when the ponds will be opened and released downstream? Is there a plan to monitor those discharges?

a. The treatment process in use at the mine is a standard metal hydroxide precipitation. Precipitates and sediments in the treatment ponds will be sampled prior to disposal. The final disposal location will be determined by the sample results. Ponds will not be opened for release. Instead, all water will be pumped out of ponds and treated prior to release. Pond sediments/sludge will be disposed of properly based on sample results.

**From:** StClair, Christie **On Behalf Of** EOC Public Information

**Sent:** Thursday, October 01, 2015 2:13 PM

**To:** Spence, Sandra; StClair, Christie; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen; Loop, Travis; Bravo, Antonio

**Cc:** Mylott, Richard; Smith, Paula

**Subject:** Re: Huffington Post (ddl Wed 10/7): long-term monitoring plan

Hi Sandie, just checking in on these responses.

Thanks,

Christie

EOC PIO

202-250-8956 

202-250-8957 

202-250-8959 

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**From:** Spence, Sandra

**Sent:** Wednesday, September 30, 2015 5:23 PM

**To:** StClair, Christie; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen; Loop, Travis; Bravo, Antonio

**Cc:** EOC Public Information; Mylott, Richard; Smith, Paula

**Subject:** RE: Huffington Post (ddl Wed 10/7): long-term monitoring plan

I plan to provide draft responses for this request but have not gotten to those yet. I should have them either later today or tomorrow for your consideration.

**From:** StClair, Christie  
**Sent:** Wednesday, September 30, 2015 3:22 PM  
**To:** Spence, Sandra; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen; Loop, Travis; Bravo, Antonio  
**Cc:** EOC Public Information; Mylott, Richard; Smith, Paula  
**Subject:** RE: Huffington Post (ddl Wed 10/7): long-term monitoring plan

Christie St. Clair

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Environmental Protection Agency

Washington, DC

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**From:** StClair, Christie  
**Sent:** Tuesday, September 29, 2015 3:26 PM  
**To:** Spence, Sandra; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom; Hamilton, Karen  
**Cc:** EOC Public Information  
**Subject:** RE: Huffington Post (ddl flexible): long-term monitoring plan

+ Karen

**Christie St. Clair**

Office of Public Affairs

Environmental Protection Agency

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m: 202-768-5780 

**From:** StClair, Christie  
**Sent:** Tuesday, September 29, 2015 3:18 PM  
**To:** Spence, Sandra; Deitz, Randy; Cohen, Nancy; Bassler, Rachel; Ostrander, David; Honker, William; Garcia, Bert; Wall, Tom  
**Cc:** EOC Public Information  
**Subject:** Huffington Post (ddl flexible): long-term monitoring plan

Hi all, this is a follow-up inquiry from a reporter who did a mine tour last month with Nancy Grantham. Please loop in anyone I have missed who can contribute to our response.

Thanks,

Christie

Reporter: Lisa Marie Jacobs

Outlet: Huffington Post/Earth Island Institute

DDL: COB 9/30

Inquiry:

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2. The plan mentions Region 8, but not Region 6 or 9. It seems to omit Colorado altogether. Are there separate plans for each region?
3. The interim plan seems to lack any input from veterinarians, medical toxicologists or agricultural toxicologists. How will EPA assess potential health impacts to humans, wildlife, livestock and crops?
4. Also, we had requested information about the concentrations in the containment ponds. We viewed three ponds where lime is being added, which we understand results in heavy metals forming hydroxates that fall to the bottom. How will that waste be dealt with? Will it be tested for safety, and where will it end up? How will the EPA determine when the ponds will be opened and released downstream? Is there a plan to monitor those discharges?

**Christie St. Clair**

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